Illinois Environmental Protection Agency
Hazardous Waste Treatment, Storage, and Disposal Facility
Annual Report of 1982 (cont.)

GROUND-WATER MONITORING DATA

SCA Chemical Services, 11700 South Stony Island Avenue, Chicago, Illinois, 60617 is conducting detection program monitoring. This program was implemented with the active use of this facility on June 25, 1982.

The groundwater monitoring system consists of a series of four monitoring wells (G-112B, G-110, G-111A, and G-113A) constructed at the boundary of a surface impoundment area. Monitoring well G-112B has been designated the upgradient well.

Reporting of information required by the detection program monitoring is as follows:

(1) Concentration or Values of Indicator Parameters in 725.192(b)(3)

Monitoring Well G-112B (upgradient)

		First Quarter	Second Quarter	Third Quarter	Fourth Quarter
pH	(SU)	9.9	9.4	9.1	8.8
			9.4	9.1	8.7
			9.4	9.2	8.9
			9.4	9.2	8.8
Specific Conductance	(umhos/cm)	4600	4000	3240	12620
			4000	3260	12630
			4000	3220	12640
			4000	3220	12570
Total Organic Carbon	(mg/l)	300	139	93	167
			138	91	167
			138	90	184
			138	89	184
Total Organic Halogen	(mg/l)	3.450	7.740	1.167	4.955
		7.900	7.860	1.138	4.829
			7.760	1.151	5.008
			7.900	1.185	4.702

Monitoring Well G-110

		First Quarter	Second Quarter	Third Quarter	Fourth Quarter
pH	(SU)	11.1	10.8	10.9	11.2
		11.1	10.8	11.0	11.2
		11.1	10.8	11.0	11.2
		11.1	10.9	11.0	11.1
Specific Conductance	(umhos/cm)	2700	4650	4400	3160
		2800	4650	4370	3160
		2800	4600	4320	3130
		2700	4600	4350	3130
Total Organic Carbon	(mg/l)	84	151	98	76
		90	151	95	74
		87	153	100	74
		86	151	97	72
Total Organic Halogen	(mg/l)	0.649	1.14	1.105	0.973
		0.615	1.24	1.198	0.957
		0.614	1.09	1.115	0.995
		0.625	1.14	1.149	1.054

Monitoring Well G-111A

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
pH (SU)	8.1	7.7	7.4	6.1
		7.8	7.4	6.6
		7.8	7.4	6.8
		7.8	7.4	6.8
Specific Conductance (umhos/cm)	6600	6500	7300	14250
		6550	7060	14220
		6550	7240	13820
		6000	7310	13730
Total Organic Carbon (mg/l)	420	339	121	320
		337	117	307
		336	118	293
		329	117	295
Total Organic Halogen (mg/l)	2.620	1.93	1.164	4.422
	2.660	1.97	1.182	5.058
		1.68	1.144	4.724
		1.92	1.182	5.808

Monitoring Well G-113A

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
pH (SU)	7.9	7.9	7.6	7.8
		7.9	7.6	7.8
		7.9	7.6	7.7
		7.9	7.6	7.8
Specific Conductance (umhos/cm)	6800	5900	6890	8180
		5900	7010	8130
		5900	6960	8010
		5900	6990	8090
Total Organic Carbon (mg/l)	300	192	53	282
		191	53	294
		190	53	316
		190	53	304
Total Organic Halogen (mg/l)	1.910	1.72	1.209	0.984
	2.060	1.73	1.220	0.958
		1.83	1.227	1.069
		1.60	1.208	0.979

Comments:

Analyses for the upgradient well (G-112B) were not done in quadruplicate for the four contamination indicators as required by Title 35, Section 725.192(c) during the first quarter. Monitoring well G-112B will be sampled for one additional consecutive quarter past the fourth quarter to complete first year sampling and analytical requirements. As regards this comment, please refer to the following correspondence:

a. Letter - Alicia Whatley/SCA Chemical Services to Mr. Mark Haney/Compliance Monitoring Section, Division of Land Pollution Control. August 11, 1982.

b. Letter - Mr. Mark Haney/Compliance Monitoring Section, Division of Land Pollution Control to Alicia Whatley/SCA Chemical Services. December 28, 1982.

Note: First quarter sampling date - June 30, 1982
Second quarter sampling date - September 8, 1982
Third quarter sampling date - December 7, 1982
Fourth quarter sampling date - March 14, 1983

(2) Evaluations of indicator parameters under 725.193(b) (results of t.-tests)

Since the initial background arithmetic means and variances for monitoring wells have not been established, evaluation of indicator parameters using the Student's t-test can not be made at this reporting. (Please see preceeding comments.)

(3) Significant differences (if any) from initial background found in upgradient wells, in accordance with 725.193(c)(1).

Comparisons of upgradient wells have not been made as initial background has not been established. (Please see preceeding comments.)

(4) Results of the evaluation of groundwater surface elevation under 725.193(f) and a description of the response to the evaluation, where applicable.

Groundwater Elevation Data

Monitoring Well	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
G-112B	6.5 ft.	6.42 ft.	8.42 ft.	8.87 ft.
G-110	5.10	3.77	2.44	0.28
G-111A	3.83	4.41	4.49	6.08
G-113A	4.38	2.72	2.85	3.93

Evaluation

The site at which the impoundment area is located and the groundwater monitoring system installed is in the form of a filled peninsula extending into Lake Calumet. The fill materials consist of masonry rubble, demolition debris, other miscellaneous pervious materials and alluvium deposits including slag, clay, silt and stones.

The layer of fill material extends approximately 7 to 18 feet from ground surface. The fill layer is underlain by a deposit of impermeable clay occupying 30 to 60 feet.

Due to the variable nature of the fill material, it is difficult to establish a true groundwater flow pattern. However, upon evaluation of the groundwater elevation data obtained during the four quarters as shown in the table above, monitoring well G-112B has consistently appeared to be in direction of increasing static head and monitoring wells G-110, G-111A and G-113A have appeared to be in the direction of decreasing static head. Therefore, we believe that the requirements under 725.19(a) continue to be met.

SCA CHEMICAL SERVICES, INC.
11700 S. Stony Island Avenue
Chicago, Illinois 60617
(312) 646-0016

SCA CHEMICAL SERVICES

August 11, 1982

Division of Land Pollution Control
Compliance Monitoring Section
2200 Churchill Road
Springfield, IL 62706

ATTN: Mr. Mark Haney

Dear Mr. Haney:

The SCA Chemical Services, Incorporated, Chicago site is a hazardous waste management facility with USEPA I.D. No. ILD-000672121. In our management of hazardous wastes we use surface impoundments (1 settling and storm water basin and 2 retention ponds) due to which we have developed and implemented a "Ground-Water Monitoring Program" pursuant to Illinois Pollution Control Board Regulations, Title 35, Section 725.190 through 725.194.

The groundwater monitoring system consists of four monitoring wells, one upgradient and three downgradient, which have been constructed at the boundary of the waste management area to collect representative samples of groundwater. These monitoring wells are designated G-112B (upgradient well), G-110, G-111A, and G-113A.

SCA has completed first quarter sampling and analyses to establish initial background concentrations for parameters specified in Section 725.192 (b). Although the reporting date for these data was July 15, 1982, SCA Chemical Services Chicago Site did not begin its active life until June 25, 1982, with the receipt of hazardous wastes for storage; as such, sampling and analyses were not accomplished in time to meet the July 15 deadline.

The table that follows summarizes the analytical results of groundwater samples for parameters that characterize the suitability of the groundwater as a drinking water supply, as specified in Appendix III-EPA Interim Primary Drinking Water Standards (40CFR265, Appendix III; revised July 1, 1981).

Sampling Date: June 30, 1982
Analysis Report Date: July 21, 1982

Analytical Results of Groundwater Sampling for EPA Interim Primary Drinking Water Parameters

Parameter	Monitoring Wells			
	G-112B upgradient (mg/l)	G-110 downgradient (mg/l)	G-111A downgradient (mg/l)	G-113A downgradient (mg/l)
Arsenic	0.160	0.021	0.110	0.420
Barium	BMDL	BMDL	1.500	BMDL
Cadmium	0.01	ND	0.014	0.022
Chromium	0.160	BMDL	0.140	0.120
Fluoride	0.86	1.4	0.45	0.48
Lead	6.900	0.026	3.100	4.400
Mercury	0.004	BMDL	0.006	0.014
Nitrate (as N)	1.1	0.17	0.81	0.84
Selenium	BMDL	BMDL	ND	BMDL
Silver	ND	ND	ND	ND
Endrin	< 0.001*	< 0.0001*	< 0.001*	< 0.0001*
Lindane	< 0.002*	< 0.002 *	< 0.002*	< 0.002 *
Methoxychlor	< 0.050*	< 0.050 *	< 0.050*	< 0.050 *
Toxaphene	< 0.025*	< 0.0025*	< 0.025*	< 0.0025*
2,4-D	< 0.050*	< 0.050 *	< 0.050*	< 0.050 *
2,4,5-TP Silvex	< 0.005*	< 0.005 *	< 0.005*	< 0.005 *
Radium	---	---	---	---
Gross Alpha	5.0 ± 2.7 pCi/l	< 9 pCi/l	< 9 pCi/l	7.0 ± 4.4 pC
Gross Beta	47 ± 6 pCi/l	33 ± 5	240 ± 20 pCi/l	70 ± 9 pCi/l
Turbidity	---	---	---	---
Coliform Bacteria	0	0	0	0

BMDL = Below EPA Method Detection Limit
ND = Not Detected
* = When a compound is not detected at or above the specific GC/ECD Method. Detection Limit established for the individual sample matrix that particular compound is reported as "< the detection limit."

--- = These parameters not analyzed. Only naturally occurring radioactive elements were believed to be present, as such radium was not analyzed. Turbidity applies to surface water samples only.

The following tables identify the parameters that have concentrations or values which have been found to exceed the maximun contaminant levels listed in Appendix III for each of the monitoring wells in the Groundwater Monitoring System.

I. Monitoring Well #G-112B

Parameter	Concentration in Groundwater Sample	
Arsenic	0.160	mg/1
Cadmium	0.01	mg/1
Chromium	0.160	mg/1
Lead	6.900	mg/1
Mercury	0.004	mg/1

II. Monitoring Well #G-110

Parameter	Concentration in Groundwater Sample	
Fluoride	1.4	mg/1

III. Monitoring Well #G-111A

Parameter	Concentration in Groundwater Sample	
Arsenic	0.110	mg/1
Cadmium	0.014	mg/1
Chromium	0.140	mg/1
Lead	3.100	mg/1
Mercury	0.006	mg/1

IV. Monitoring Well #G-113A

Parameters	Concentration in Groundwater Sample	
Arsenic	0.420	mg/1
Cadmium	0.022	mg/1
Chromium	0.120	mg/1
Lead	4.400	mg/1
Mercury	0.014	mg/1

Please also note that for Monitoring Wells G-112B and G-111A, the analytical results for both endrin and toxaphene have been reported as less than 0.001 mg/l and less than 0.025 mg/l respectively which are both higher than the EPA maxium levels established for these parameters. With the application of EPA Standard protocol methods to groundwater samples for monitoring wells G-112B and G-111A, the sample matrices interfered with the sensitivity to the point that the testing laboratory reports that lower detection limits could not be resolved.

As an aside from the July 15 reporting requirements, there is another matter concerning groundwater monitoring data that I have discussed with Messrs. John Student (Springfield Office) and Kevin Pierard (Maywood Office) and with you via telephone as well.

Through an error on the part of the laboratory conducting the analyses of groundwater samples in our monitoring system, the analyses for the upgradient well (G-112B) were not done in quadruplicate for parameters used as indicators of groundwater contamination (i.e. pH, specific conductance, total organic carbons, and total organic halogen). This error has of course reduced the number of replicate measurements that will be used in the first year calculations for initial background from 16 to 13 measurements. Both Messrs. Student and Pierard have agreed that rather than delay the July 15 reporting any further by waiting for additional testing and analyses to achieve the replicate results, that the required data should be reported as is and that 13 measurements be used to establish the initial background for the first year.

Would you be kind enough to evidence your consent and agreement to the foregoing by providing me with a written response.

Sincerely,

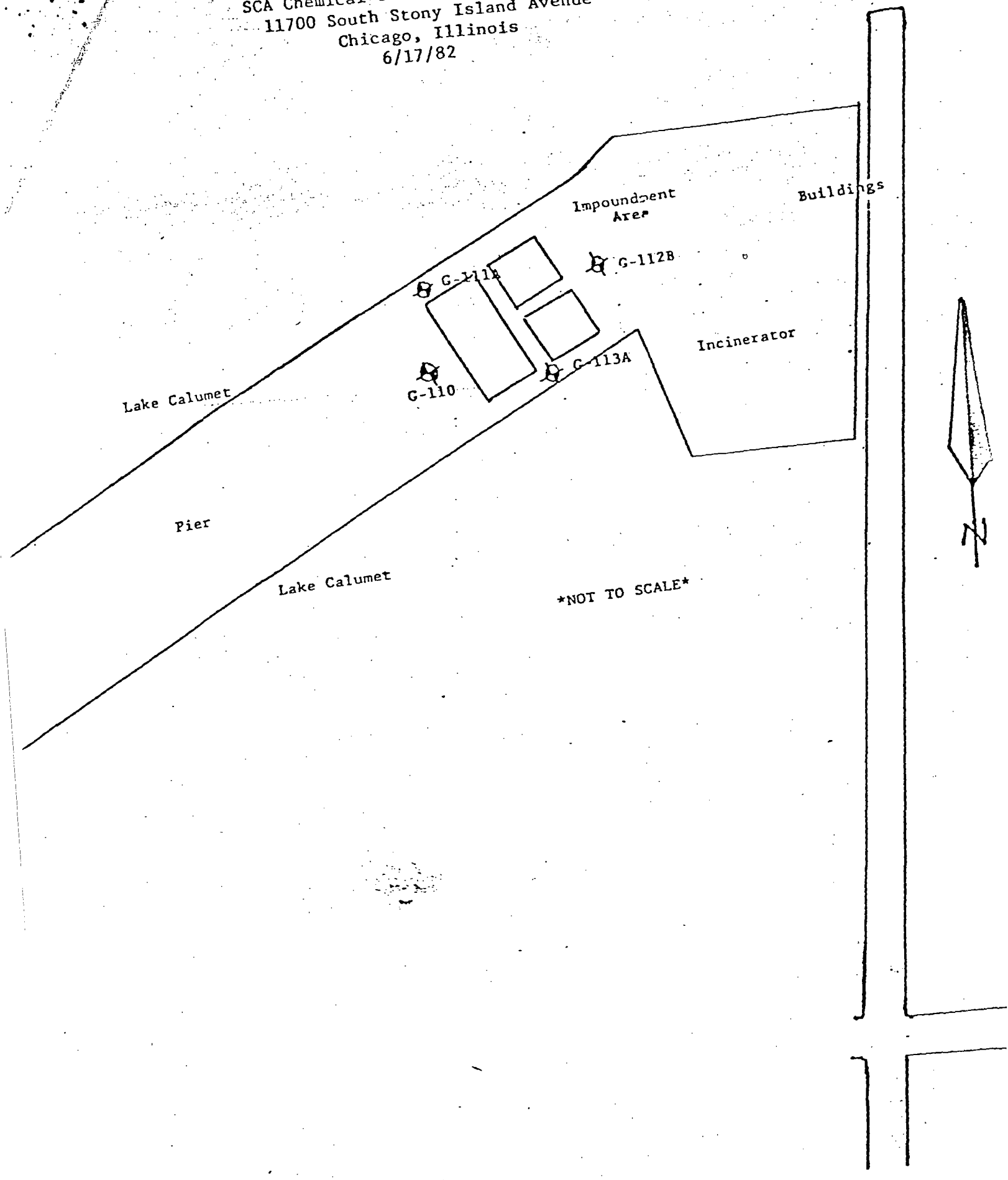
Alicia Whatley, Ph.D.
Safety and Regulatory Affairs Manager

Attachments: 1. Map showing locations of Monitoring Wells
2. Well Installation Data
3. Typical Monitoring Well Construction

bcc: C. Rose
J. Valerius
G. Kush

Attachment I

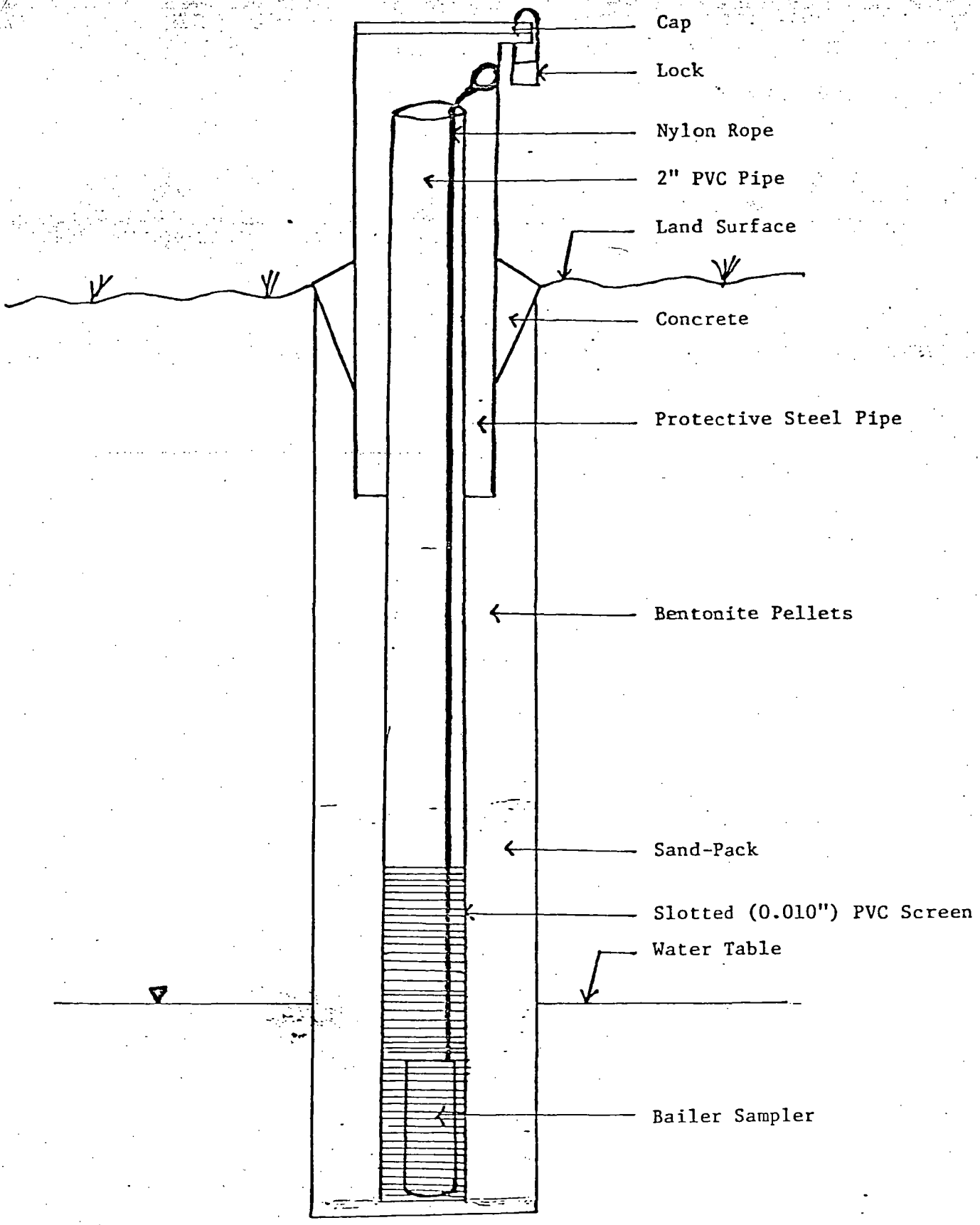
Ground-Water Monitoring Well Locations
SCA Chemical Services, Incorporated
11700 South Stony Island Avenue
Chicago, Illinois
6/17/82



Well Installation Data

Monitoring Well Number	Depth of Well from Top of Metal Protection Pipe(ft)	Elevation of Top of Metal Protection Pipe(ft)	Elevation of Ground Surface	Sampling Method
G-110	27.42	15.77	13.31	Bailer
G-111A	13.46	11.66	9.91	Bailer
G-112B	15.42	13.92	11.50	Bailer
G-113A	15.63	13.05	10.92	Bailer

Typical Monitoring Well with Bailer Sampler



03758 MAR 18

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

L P C S M 0 1 0 (1)–(8) SITE INVENTORY NUMBER 0316005 8 (9)–(16)

MONITOR POINT NUMBER G111A (17)–(20) DATE COLLECTED 031783 (21)–(26)

Cook Co. - LPC REGION N (27)

Chicago (Location) / SCA (Responsible Party)

Legal (1); Illegal (2); Indicate One: 1 (28) Board Order (X) (29)

Time Collected 1:40 ~~a.m.~~ p.m. Unable to collect sample (X) (30)

Stick-up 1.7 ft. (31)(33) Depth to water (from T.O.C.) 2.3 ft. (34)(36)

Sample temp. 44° F (37)(39) Background (X). . . . X (40)

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) 1 (41)

Sample Appearance: gray, turbid, slight odor

Collector comments: T.D. 13.9'

Craig Liska — Collected by; DLPC — Div. or Company

Same — Transported by; " — Div. or Company

LAB USE ONLY

Lab No. C003758

Date Rec'd 3-18-83

Rec'd by [signature] Time 11:30 ~~a.m.~~ p.m.

Sample temp. acceptable (YES) NO

Sample properly preserved (YES) NO

Date completed

Date forwarded MAR 19 1983

[signature] Supervisor Signature

Name of Lab: Environmental Protection Agency, Division of Laboratory Services
Address: 2121 W. Taylor Street, Chicago, Illinois 60612

LPCSM020
Lab Comments:
~~[struck]~~ (27)–(36)
~~[struck]~~ (37)–(46)
ROE 11300 (47)–(56)
SC 13873 (57)–(66)
Hg 0.0000 8 (67)–(76)

Private Lab (X)
IEPA Lab (X) X (77)

LPCSM030

		PARAMETERS*	PPM*
27	X	Alkalinity[1]	990.
31	X	Ammonia as N	79.0X
37	X	Arsenic As	0.005
44	X	Barium Ba	Interference
49		BOD -5	
53	X	Boron B	4.9
58	X	Cadmium Cd	0.00
64	X	Calcium Ca	1430.X
69	X	COD	560.
73	X	Chloride Cl	5325

LPCSM040

27	X	Chromium Cr (tot)	0.01
33		Chromium Cr^{+6}	
39	X	Copper Cu	0.00
45	X	Cyanide CN	0.01X
52		Fecal Coli (#/100 ml)	
56	X	Fluoride F	0.4
61	X	Hardness $CaCO_3$	6200.
65	X	Iron Fe	1.2
70	X	Lead Pb	0.06

LPCSM050

27	X	Magnesium Mg	571.X
32	X	Manganese Mn	0.63
38	X	Mercury Hg	———
46	X	Nickel Ni	0.0
51	X	Nitrate-nitrite N	0.0
56		Oil and Grease	
60	X	pH (Units)	7.5
63	X	Phenolics	0.160
70	X	Phosphorus P	0.90
76	X	Potassium K	285.X

LPCSM060

27	X	R.O.E. (180°C)	———
31	X	Selenium Se	0.002
36	X	Silver Ag	0.02
44	X	Sodium Na	776.X
49	X	SC (umhos/cm)	———
53	X	Sulfate SO_4	143.X
58	X	Zinc Zn	0.0
63	X	Sulfides	0.XXXX

*Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1] Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

H.W

IL 532-0313
LPC 8 3/77

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

03759 MAR 83

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 0 3 1 6 0 0 5 P (16)

MONITOR POINT NUMBER (17) G 1 1 2 B (20) DATE COLLECTED (21) 0 3 1 7 8 3 (26)

Cook Co. - LPC REGION (27) N

Chicago (Location) / SCA (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected 12:30 a.m. / p.m. Unable to collect sample (X) (30)

Stick-up (31) 2.3 ft. (33) Depth to water (from T.O.C.) (34) 9.8 ft. (36)

Sample temp. (37) 4 8 ° (39) F Background (X). . . . (40) X

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) (41) 1

Sample Appearance: gray, turbid, slight odor

Collector comments: T.O. 14.5'

Craig Liska — Collected by — DLPC — Div. or Company

Same — Transported by — " — Div. or Company

LAB USE ONLY

Lab No. C003759

Date Rec'd 3.18.83

Rec'd by [illegible] Time 11:30 a.m. / p.m.

Sample temp. acceptable (YES) NO

Sample properly preserved YES NO

Date completed

Date forwarded 4-19-83

J Daugherty
Supervisor Signature

Name Environmental Protection Agency
Address of Lab Division of Laboratory Services
2121 W. Taylor Street
Chicago, Illinois 60612

LPCSM020
Lab Comments:

(27) Hg < 0.00005 (36)

(37) (46)

(47) (56)

(57) (66)

(67) (76)

Private Lab (X)

IEPA Lab (X) (77) X (78)

LPCSM030

		PARAMETERS*	PPM*
27	X	Alkalinity[1]	72.
31	X	Ammonia as N	30.0 X
37	X	Arsenic As	0.006
44	X	Barium Ba	Interference
49		BOD -5	
53	X	Boron B	2.3
58	X	Cadmium Cd	0.00
64	X	Calcium Ca	1977. X
69	X	COD	225.
73	X	Chloride Cl	2780

LPCSM040

27	X	Chromium Cr (tot)	0.02
33		Chromium Cr^{+6}	
39	X	Copper Cu	0.00
45	X	Cyanide CN	0.02 X
52		Fecal Coli (#/100 ml)	
56	X	Fluoride F	0.3
61	X	Hardness $CaCO_3$	4500.
65	X	Iron Fe	0.2
70	X	Lead Pb	0.09

LPCSM050

27	X	Magnesium Mg	79.1
32	X	Manganese Mn	0.06
38	X	Mercury Hg	
46	X	Nickel Ni	0.0
51	X	Nitrate-nitrite N	0.0
56		Oil and Grease	
60	X	pH (Units)	9.1
63	X	Phenolics	3.41 X
70	X	Phosphorus P	0.96
76	X	Potassium K	184. X

LPCSM060

27	X	R.O.E. (180°C)	7430.
31	X	Selenium Se	0.002
38	X	Silver Ag	0.03
44	X	Sodium Na	317. X
49	X	SC (umhos/cm)	8753.
53	X	Sulfate SO_4	1200 X
58	X	Zinc Zn	0.0
63	X	Sulfides	Interference

*Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1]Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

H. W.

IL 532-0313
LPC 8 3/77

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

003760 MAR 18

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8)

SITE INVENTORY NUMBER (9) 0 3 1 6 0 0 5 8 (16)

MONITOR POINT NUMBER (17) G 1 1 0 (20)

DATE COLLECTED (21) 0 3 1 7 8 3 (26)

Cook Co. - LPC REGION (27) N

Chicago (Location) / SCA (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected 1:00 a.m. p.m. Unable to collect sample (X) (30)

Stick-up (31) 2.4 (33) ft. Depth to water (from T.O.C.) (34) 12.9 (36) ft.

Sample temp. (37) 49 ° (39) F Background (X). . . . (40) X

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) (41) 1

Sample Appearance: brownish gray, slightly turbid

Collector comments: T.O. 26.55

Craig Liska — Collected by — DLPC — Div. or Company

Jane — Transported by — " — Div. or Company

LAB USE ONLY

Lab No. C003760

Date Rec'd 3.18.83

Rec'd by [illegible] Time 11:30 a.m.

Sample temp. acceptable (YES) NO

Sample properly preserved YES NO

Date completed

Date forwarded ~~M.R. 19, 1983~~

Supervisor Signature

Name Environmental Protection Agency

Address of Lab ~~Division of Laboratory Services~~ 2121 W. Taylor Street ~~Chicago, Illinois~~ 60612

LPCSM020
Lab Comments:

(27) Hg 0.00007 (36)

(37) ---------- (46)

(47) ---------- (56)

(57) ---------- (66)

(67) ---------- (76)

Private Lab (X)

IEPA Lab (X) (77) (78)

LPCSM030

		PARAMETERS*	PPM*
27	X	Alkalinity[1]	100.
31	X	Ammonia as N	.78 X
37	X	Arsenic As	0.008
44	X	Barium Ba	0.1
49		BOD -5	
53	X	Boron B	0.8
58	X	Cadmium Cd	0.00
64	X	Calcium Ca	546. X
69	X	COD	160.
73	X	Chloride Cl	528

LPCSM040

27	X	Chromium Cr (tot)	0.00
33		Chromium Cr^{+6}	
39	X	Copper Cu	0.06
45	X	Cyanide CN no bottle CJL	
52		Fecal Coli (#/100 ml)	
56	X	Fluoride F	.4
61	X	Hardness $CaCO_3$	1200.
65	X	Iron Fe	0.3
70	X	Lead Pb	0.0

LPCSM050

27	X	Magnesium Mg	3.1
32	X	Manganese Mn	0.01
38	X	Mercury Hg	
46	X	Nickel Ni	0.0
51	X	Nitrate-nitrite N	0.0 X
56		Oil and Grease	
60	X	pH (Units)	10.5
63	X	Phenolics	0.080
70	X	Phosphorus P	0.31
76	X	Potassium K	48. X

LPCSM060

27	X	R.O.E. (180°C)	2530
31	X	Selenium Se	0.002
38	X	Silver Ag	0.00
44	X	Sodium Na	282. X
49	X	SC (umhos/cm)	3060
53	X	Sulfate SO_4	870. X
56	X	Zinc Zn	0.0
63	X	Sulfides	Interference

*Analyses are to be performed on unfiltered samples. *Values exceeding no. of places shown are reported in the lab comments section; tests requested but not run should also be explained in the lab comments section.

[1]Alkalinity is to be determined as ppm of $CaCO_3$ at pH 4.5.

H.W.

IL 532-0313
LPC 8 3/77

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF LAND/NOISE POLLUTION CONTROL
CHEMICAL ANALYSIS FORM

03761 MAR 18

Key for Determining Type of Monitoring Point

(S) Surface Water	(G) Ground Water	(L) Leachate	(X) Special
(1) Upstream	(1) Monitor Well	(1) Flow or seep	(1) Soil
(2) Mid-site	(2) Private well	(2) Pond	(2) Waste
(3) Downstream	(3) Spring	(3) Collection System	(3) Other
(4) Run-off	(4) Lysimeter		
(5) Impounded	(5) Public W S		

Name (Private Well, Stream, Spring, Impounded Water only)

(1) L P C S M 0 1 0 (8) SITE INVENTORY NUMBER (9) 0 3 1 6 0 0 5 8 (16)

MONITOR POINT NUMBER (17) G 1 1 3 A (20) DATE COLLECTED (21) 0 3 1 7 8 3 (26)

Cook Co. - LPC REGION (27) N

Chicago (Location) / SCA (Responsible Party)

Legal (1); Illegal (2); Indicate One: (28) 1 Board Order (X) (29)

Time Collected 12:45 a.m. p.m. Unable to collect sample (X) (30)

Stick-up (31) 1.7 (33) ft. Depth to water (from T.O.C.) (34) 9.4 (36) ft.

Sample temp. (37) 49 ° (39) F Background (X). . . . (40) X

Ground water sampled by (Indicate one): (1) Bailing; (2) Pumping; (3) Other (Specify) (41) 1

Sample Appearance: dark gray, highly turbid strong odor

Collector comments: T. D. 13.9

Craig J. Liska — OLPC
Collected by — Div. or Company

Jane — "
Transported by — Div. or Company

LAB USE ONLY

Lab No. C003761

Date Rec'd 3.18.83

Rec'd By [illegible] Time 11:30 a.m.

Sample temp. acceptable (YES) NO

Sample properly preserved YES NO

Date completed

Date forwarded MAR 19 1983

J Dougherty
Supervisor Signature

Name Environmental Protection Agency
Address Division of Laboratory Services
of Lab 2121 W. Taylor Street
Chicago, Illinois 60612

LPCSM020 Lab Comments:

(27) Sulfides (38)

(37) 3.8 (46)

(47) Hg 0.00009 (56)

(57) (66)

(67) (76)

Private Lab (X) (77)

IEPA Lab (X) X (78)

LPCSM030

		PARAMETERS+	PPM*
27	X	Alkalinity[1]	276.
31	X	Ammonia as N	6.7X
37	X	Arsenic As	0.074
44	X	Barium Ba	0.0
49		BOD -5	
53	X	Boron B	2.4
58	X	Cadmium Cd	0.00
64	X	Calcium Ca	665.X
69	X	COD	210.
73	X	Chloride Cl	2200.

LPCSM040

27	X	Chromium Cr (tot)	0.00
33		Chromium Cr^{+6}	
39	X	Copper Cu	0.00
45	X	Cyanide CN	0.03X
52		Fecal Coli (#/100 ml)	
56	X	Fluoride F	0.4
61	X	Hardness $CaCO_3$	440.
65	X	Iron Fe	0.5
70	X	Lead Pb	0.05

LPCSM050

27	X	Magnesium Mg	658.X
32	X	Manganese Mn	0.30
38	X	Mercury Hg	
46	X	Nickel Ni	0.0
51	X	Nitrate-nitrite N	0.0
56		Oil and Grease	
60	X	pH (Units)	7.5
63	X	Phenolics	0.047
70	X	Phosphorus P	0.17
76	X	Potassium K	208.X

LPCSM060

27	X	R.O.E. (180°C)	1230.
31	X	Selenium Se	0.000
38	X	Silver Ag	0.00
44	X	Sodium Na	348.X
49	X	SC (umhos/cm)	7432
53	X	Sulfate SO_4	1650.X
58	X	Zinc Zn	0.0
63	X	Sulfides	XXXXX

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